



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,878	01/05/2007	Rongxun Wang	09548.1020USWO	6907
52835 7590 10/27/2010 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902				
EXAMINER				
LAUX, JESSICA L				
ART UNIT		PAPER NUMBER		
3635				
MAIL DATE		DELIVERY MODE		
10/27/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/571,878

Applicant(s)

WANG, RONGXUN

Examiner

JESSICA LAUX

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 23-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20, 23-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI.08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Interval Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Acknowledgment is made of the amendment filed 8/12/2010. The specification, drawings and claims have been amended accordingly.

Response to Arguments

Applicant's arguments filed 8/12/2010 have been fully considered but they are not all persuasive.

Steinhage does disclose a projecting portion formed by a sloped upper slope portion that is engaged with a downward flared shape recess of an upper block where the lower block supports the upper block via the sloped portions as noted below, where the left support slope is comprised of elements 110,105,101 and the right support slope is comprised of elements 111,106,102 at least elements 105,106 support the upper block. The entire composition of elements 110,105,101, and 111,106,102 are considered to make up the sloped portions and therefore are considered to support the upper block and anticipate applicant's invention as presently claimed.

Applicant's arguments, with respect to the top ridge of a bottommost block being higher than a bottom foot of an uppermost block when three blocks are vertically stacked are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bouchard (6108995).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Steinhage et al (2550945).

Claims 30,33. Steinhage et al discloses a block for forming a wall, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, comprising:

a block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess (as seen in for example figure 2);

the top surface of said block having a mid ridge (107) higher than two sides of the surface so that a left supporting slope (generally 110, 105, 101) and a right supporting slope (generally 111, 106, 102) form the downward-flared recess;

said upper surface and bottom surface being formed such that when the block being overlapped with an analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks (as seen in figure 4);

wherein said left supporting slope and the right supporting slope each including a sloped upper slope portion (110, 111) and a lower shoulder (105,106), respectively, each shoulder having a top shoulder surface (generally at 105,106), a bottom shoulder surface (103,104), and a lateral side surface (the side extending therebetween),

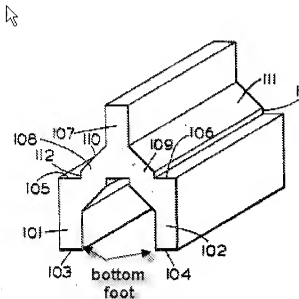
the top shoulder surface, the upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal (as seen in the figures), the bottom shoulder surface and a bottom foot (as noted in the annotated figure below) on one side are at the same plane,

when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block and thereby supporting the upper analogous block (as seen in figure 4),

the blocks being shaped and sized such that when three analogous blocks being overlapped vertically, the vertical distance between a top of a ridge of the bottommost block being less than one third the height of one block (as seen in the figures);

said blocks being engaged with auxiliary blocks in the construction of the wall;
and

masonry joints being formed between the adjacent blocks, horizontal masonry joints being formed by the engagement between the top surfaces and the bottom surfaces, vertical masonry joints being formed by the engagement between the end surfaces, the vertically adjacent vertical masonry joints being arranged staggeringly (as seen in the figures and noted in the disclosure).



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinhage et al (2550945) in view of Bouchard et al (6108995).

Claim 20. Steinhage et al discloses a block for forming a wall, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, comprising:

a block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess (as seen in for example figure 2);

the top surface of said block having a mid ridge (107) higher than two sides of the surface so that a left supporting slope (generally 110, 105, 101) and a right supporting slope (generally 111, 106, 102) form the downward-flared recess;

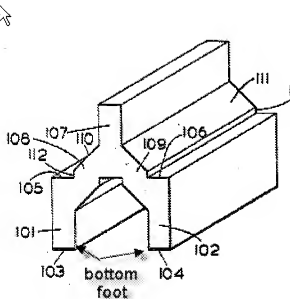
said upper surface and bottom surface being formed such that when the block being overlapped with an analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks (as seen in figure 4);

wherein said left supporting slope and the right supporting slope each including a sloped upper slope portion (110, 111) and a lower shoulder (105,106), respectively, each shoulder having a top shoulder surface (generally at 105,106), a bottom shoulder surface (103,104), and a lateral side surface (the side extending therebetween),

the top shoulder surface, the upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal (as seen in the figures), the bottom shoulder surface and a bottom foot (as noted in the annotated figure below) on one side are at the same plane,

when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-

flared shaped recess of the upper analogous block and thereby supporting the upper analogous block (as seen in figure 4).



Steinhage does not expressly disclose that the blocks are shaped and sized such that when three analogous blocks being overlapped vertically, the vertical distance between a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block.

Bouchard discloses a block for forming a wall having a mid ridge and left and right supporting sloping surfaces and further Bouchard discloses an embodiment where when three analogous blocks are vertically stacked the distance between a top ridge of the bottommost block is higher than the bottom foot of the uppermost block (as seen in figure 31).

Thus, it would have been obvious to a person of ordinary skill in the art to try the distance configuration in an attempt to provide an improved design of blocks, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the block as claimed has the properties predicted by the prior art, it would have been obvious to modify the block of Steinhage to have a mid-ridge of a bottommost block higher than the bottom foot of a third block vertically stacked.

Claim 23. The block for forming a wall according to claim 20, wherein on either side of the block, bounded by the mid ridge, the bottom shoulder surface of the shoulder and the bottom foot of the block being on the same plane, the top surface and the bottom surface being parallel to each other, the two end surfaces being parallel to each other, the two lateral side surfaces being parallel to each other, the end surfaces and the lateral side surfaces being vertical to the horizontal plane (as seen in figure 2 of Steinhage).

Claim 24. The block for forming a wall according to claim 20, wherein the top of the mid ridge being sharp-angle shaped, platform shaped or arc-shaped (as seen in figure 4 of Steinhage, where it is platform shaped).

Claims 25, 26, 27. The block for forming a wall according to claim 20, wherein at least one of the left and right supporting slopes and the bottom surface being arranged in a stepped, roughened or corrugated manner (as seen in figure 2 of Steinhage).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable Steinhage et al (2550945) in view of Bouchard et al (6108995) and further in view of Bilka (6606835).

Claim 28. Steinhage in view of Bouchard discloses the block for forming a wall according to claim 20 as above, but does not disclose a top surface having a radiation-proof plate thereon.

Bilka discloses a block for forming a wall with a peak and side slopes for stacking one atop the other and further discloses that the top surface has a radiation-proof plate (60) thereon, which extends out of at least one of the end surfaces, the radiation-proof plates of the adjacent blocks being connected in a manner of end to end, when the wall being formed by the blocks (as seen in figure 2).

or

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable Steinhage et al (2550945) in view of Bouchard et al (6108995) and further in view of Hancock (3355849).

Claim 28. Steinhage in view of Bouchard discloses the block for forming a wall according to claim 20 as above, but does not disclose that the top surface has a radiation-proof plate thereon.

Hancock discloses a block for forming a wall with a peak and side slopes for stacking on atop the other and further discloses that the top surface has a radiation-proof plate (21) thereon, which extends out of at least one of the end surfaces, the

radiation-proof plates of the adjacent blocks being connected in a manner of end to end, when the wall being formed by the blocks (as seen in figure 4).

**Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable
Steinhage et al (2550945) in view of Bouchard et al (6108995) or French Patent
2.221.036 as submitted by applicant.**

Claim 29. Steinhage in view of Bouchard discloses the block for forming a wall according to claim 20 as above, but does not disclose that the bottom foot on one side of the block is higher than that on the other side.

Bouchard and the French reference both disclose blocks having a mid-ridge and sides slopes with shoulders for forming wall assemblies, and further disclose that the bottom foot on one side of the block is higher than that on the other side of the block.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the block of Steinhage to have one bottom foot lower than the other to accommodate various wall constructions and installations such as for a veneer wall.

**Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Gravier et al. in view of Steinhage et al (2550945) .**

Claim 34. Steinhage discloses the wall according to claim 33 above, but does not expressly disclose a pillar being provided in the wall with at least one outward-extending piece being provided on the pillar.

Gravier discloses a wall made of blocks including a pillar (generally 74) and having an outward extending piece (the first block extending out from the pillar)

provided on the pillar similar to the blocks, where one end surface of the outward-extending piece being engaged with the pillar; the other end surface of the outward-extending piece being engaged with the blocks, the top surface of the outward-extending piece being engaged with the bottom surface of the upper block, the bottom surface of the outward-extending piece being engaged with the top surface of the underlying block, a plurality of outward-extending pieces being arranged separately and orderly on the pillar, said outward-extending pieces being engaged with the staggeringly overlapped blocks adjacent to the pillar.

At the time the invention was made it would have been obvious to modify the wall of Gravier to have a block and outward extending piece with a shape and design as disclosed by Steinhage to provide a wall with blocks having a solid connection. Further it is noted that one of ordinary skill in the art would have had the common sense and ability to pursue known options and substitute one block design for another to achieve a desired and predictable result. Therefore the substitution of one known block design for another is not considered novel but rather obvious.

Claim 35. Wherein girders (20) are provided in the wall, a projecting piece (as noted in claim 34 above, where the projecting piece is the first block to engage the pillar) being provided on a top surface of one girder, a lower surface of the projecting piece being engaged with the top surface of the girder, the projecting piece extending to the pillar at a nodal point of two adjacent beam/pillar, and engaging with the pillar, the projecting piece being engaged with the downward-flared recess of the block (where a block would be placed above); a groove being provided on a bottom surface of another

girder, the groove extending to the pillar at the nodal point of two adjacent beams, the groove being engaged with the top surface of the block, when the block engaging with the bottom surface of the girder (as seen in the figures).

Claims 31-32, 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable Steinhage et al (2550945) in view of Dwyer et al (1686270).

Claims 31,32,36,37. Steinhage discloses the block according to claims 30 and 33 as above, but does not expressly disclose the wall structure as claimed in claims 31-32,36-37.

Dwyer et al. discloses block assembly for forming a wall including an auxiliary block comprising three of said blocks, two of them longitudinally opposing to each other and joining, respectively, to the side of the other block; said auxiliary block being provided at the intersection between the walls, being longitudinally engaged with the blocks, and being staggeringly overlapped (as seen in figures 1-2); or

the auxiliary block comprising two of said blocks, the longitudinal portion of one block joining to one side of the other block so that the auxiliary blocks being in a shape of L or T (as seen in figure 1); said auxiliary block being provided at the intersection between the walls, being longitudinally engaged with the blocks, and being staggeringly overlapped (as seen in figures 1-2);

the block wall having masonry joints being formed between the adjacent blocks, horizontal masonry joints being formed by the engagement between the top surfaces and the bottom surfaces, vertical masonry joints being formed by the engagement

between the end surfaces, the vertically adjacent vertical masonry joints being arranged staggeringly (as seen in the figures);

wherein said block being in a shape of a elongated plate (as seen in the figures), a miter wall being formed by staggeringly overlapping the elongated blocks, a vertical masonry joint being formed by the connection of the end surfaces of two blocks, the vertically adjacent vertical masonry joints being disposed in a staggered manner, the end of the elongated block being supported on a supporting member (as seen in figures 1-2).

In view of the above references it would have been obvious to one of ordinary skill in art the time the invention was made to use the block of Steinhage to form a wall system as disclosed by Dwyer as using blocks to form walls is notoriously common and well known and it would be desirable to use an appropriate and aesthetically pleasing design in creating a wall assembly. Further one of ordinary skill in the art has good reason and would have the common sense to pursue known block designs when building a wall assembly such as that disclosed by Dwyer and since the block of Dwyer and Steinhage are similar in that they both have a mid-ridge and slopes with shoulders one of ordinary skill in the art would have reasonable expected the block of Steinhage to be suitable for forming the wall assembly of Dwyer as noted above and according to claims 31-32,36-37.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA LAUX whose telephone number is (571)272-

8228. The examiner can normally be reached on Monday thru Thursday, 9:00am to 5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jessica Laux/
Examiner, Art Unit 3635